

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-44 (cancelled).

45. (Previously Presented) An apparatus for transmitting an optical signal comprising:
an optical signal source configured to generate an optical signal;
a data modulator coupled to said optical signal source and configured to modulate data on said optical signal at a data modulation frequency; and
an amplitude modulator coupled to said optical signal source and configured to modulate the intensity of said optical signal at an amplitude modulation frequency phase locked to said data modulation frequency,
said data modulation frequency being provided by a clock coupled to said amplitude modulator and said data modulator.

46. (Previously Presented) The apparatus of claim 45 wherein said amplitude modulation frequency is equal to said data modulation frequency.

47-48. (Cancelled).

49. (Previously Presented) The apparatus of claim 45 wherein the optical signal source includes a continuous-wave optical signal generator, wherein said data is provided to said data modulator by a data source coupled to said data modulator.

50. (Previously Presented) The apparatus of claim 49, wherein said continuous-wave optical signal generator comprises a laser.

51. (Previously Presented) The apparatus of claim 45 wherein the amplitude modulator modulates the amplitude of said optical signal at said data modulation frequency with a prescribed phase.

52. (Previously Presented) The apparatus of claim 51 further comprising an electrical variable-delay line coupling said clock to said amplitude modulator for selectively varying the prescribed phase.

53. (Previously Presented) The apparatus of claim 52 wherein said electrical variable-delay line is a phase shifter.

54. (Previously Presented) The apparatus of claim 51 wherein said apparatus includes means for selectively adjusting the degree of intensity modulation that is imparted to said optical signal.

55. (Previously Presented) The apparatus of claim 45 wherein said apparatus includes means for selectively adjusting the degree of intensity modulation that is imparted to said optical signal.

56. (Previously Presented) The apparatus of claim 45 further comprising a polarization modulator coupled to said data modulator for modulating the state of polarization of said optical signal at said data modulation frequency such that an average value of the state of polarization over a modulation cycle is substantially equal to zero.

57. (Previously Presented) The apparatus of claim 56, said clock being coupled to said polarization modulator.

58. (Previously Presented) The apparatus of claim 56 wherein said polarization modulator is coupled to said data modulator through said amplitude modulator.

59. (Previously Presented) The apparatus of claim 56 wherein said polarization modulator modulates the state of polarization by tracing the polarization of said optical signal along at least a portion of a Poincare sphere.

60. (Previously Presented) The apparatus of claim 56 wherein the polarization modulator modulates the state of polarization of the optical signal at said data modulation frequency with a prescribed phase.

61. (Previously Presented) The apparatus of claim 60, further comprising an electrical variable-delay line coupled to said polarization modulator for selectively varying the prescribed phase.

62. (Previously Presented) The apparatus of claim 61, wherein said electrical variable-delay line couples said clock to said polarization modulator.

63. (Previously Presented) The apparatus of claim 61 wherein said electrical variable-delay line is a phase shifter.

64. (Previously Presented) The apparatus in accordance with claim 45 further comprising a phase modulator coupled to said data modulator, said phase modulator configured to provide optical phase modulation to said optical signal.

65. (Previously Presented) The apparatus of claim 64 wherein said amplitude modulator is coupled to said data modulator through said phase modulator.

66. (Previously Presented) The apparatus of claim 65 wherein said clock is coupled to said phase

modulator so that said phase modulator provides optical phase modulation at a frequency that is phase locked and equal to said data modulation frequency.

67. (Previously Presented) The apparatus of claim 66 further comprising an electrical variable-delay line coupling said clock to said phase modulator for selectively varying the phase of said optical phase modulation provided by the phase modulator.

68. (Previously Presented) The apparatus of claim 67 wherein said electrical variable-delay line is a phase shifter.

69. (Previously Presented) The apparatus of claim 64 wherein said clock is coupled to said phase modulator, such that said phase modulator provides phase modulation at a frequency that is phase locked and equal to said data modulation frequency.

70. (Previously Presented) The apparatus in accordance with claim 64 wherein said phase modulator is coupled to said data modulator through said amplitude modulator.

71. (Previously Presented) The apparatus of claim 70, wherein said clock is coupled to said phase modulator, such that said phase modulator provides phase modulation at a frequency that is phase locked and equal to said data modulation frequency.

72. (Previously Presented) The apparatus of claim 45 wherein said amplitude modulator is driven by a sinusoidal signal to modulate said intensity of said optical signal.

73-143. (Cancelled)